

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



FILED
5-25-16
04:59 PM

Order Instituting Rulemaking to
Consider Alternative-Fueled Vehicle
Programs, Tariffs, and Policies.

Rulemaking 13-11-007
(Filed November 14, 2013)

**COMMENTS OF POWERTREE SERVICES, INC.
ON PROPOSED DECISION AUTHORIZING FURTHER EXTENSION OF
INTERIM POLICY REGARDING ELECTRIC TARIFF RULES 15 AND 16**

Donald C. Liddell
DOUGLASS & LIDDELL
2928 2nd Avenue
San Diego, California 92103
Telephone: (619) 993-9096
Facsimile: (619) 296-4662
Email: liddell@energyattorney.com

Counsel for
POWERTREE SERVICES, INC.

May 25, 2016

TABLE OF CONTENTS

I.	INTRODUCTION.	1
II.	THE FULL COST OF ELECTRIC WORK UP TO ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED IN ACCORDANCE WITH INDUSTRY STANDARD SPECIFICATION SHOULD BE CAPTURED BY ELECTRIC TARIFF RULES 15 AND 16 ALLOWANCES.	3
III.	MULTI-TENANT AND MULTI-FAMILY RESIDENTIAL PROPERTIES SHOULD BE EXPLICITLY INCLUDED WITHIN THE SCOPE OF RESIDENTIAL PROPERTIES COVERED BY THE EXTENSION OF ELECTRIC TARIFF RULES 15 AND 16.	4
IV.	ELECTRIC VEHICLE SUPPLY EQUIPMENT LOADS SHOULD BE DEEMED PRIMARY WHEN INTEGRATED WITH ENERGY STORAGE SYSTEMS, AND SHOULD NOT BE DOUBLE COUNTED.	4
V.	CONCLUSION.	6
APPENDIX A		

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to
Consider Alternative-Fueled Vehicle
Programs, Tariffs, and Policies.

Rulemaking 13-11-007
(Filed November 14, 2013)

**COMMENTS OF POWERTREE SERVICES, INC.
ON PROPOSED DECISION AUTHORIZING FURTHER EXTENSION OF
INTERIM POLICY REGARDING ELECTRIC TARIFF RULES 15 AND 16**

In accordance with the provisions of Rule 4.3 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), Powertree Services, Inc. (“Powertree”) hereby submits these comments on the *Proposed Decision Authorizing Further Extension of Interim Policy Regarding Electric Tariff Rules 15 And 16*, issued on May 5, 2016. (“Proposed Decision”).

I. INTRODUCTION.

Powertree is a developer, owner, and operator of integrated solar PV generation, grid-tied energy storage, and plug-in electric vehicle (“PEV”) charging services referred to in its public marketing and investor-related materials as the “Powertree.” Powertree’s business model is focused on developments of integrated PEV generation, energy storage, and PEV systems called “Powertrees” in multi-unit residential dwellings and commercial multi-tenant properties. Powertree is currently deploying a substantial number of integrated projects in California that include PEVs and are within the scope of this proceeding and the Proposed Decision.

Powertree strongly supports the Proposed Decision, and commends the Proposed Decision’s well-justified determination to extend the policy of allowances for light-duty hybrid and battery PEV charging stations to be afforded common treatment for excess PEV charging costs of local electric distribution line upgrades through June 30, 2019. Powertree greatly

appreciates the Commission's continuing commitment to well established fundamental policy purpose to be effectuated by the Proposed Decision.¹ The Commission's steady and resolute focus on the critical importance of electric tariff Rules 15 and 16 is only now beginning to bear fruit.²

Rather than simply extending electric tariff Rules 15 and 16 at this time, Powertree recommends adoption of several lessons learned with experience concerning continuing challenges facing accelerated deployment of PEVs and electric vehicle supply equipment ("EVSE") deployment impacted by electric tariff Rules 15 and 16 that should be addressed in the Commission's final decision, namely: (a) the *full cost* of electric work up to EVSE installed in accordance with industry standard specification should be captured by electric tariff Rules 15 and 16 allowances; (b) multi-tenant and multi-family residential properties should be *explicitly* included within the scope of residential properties covered by the extension of electric tariff Rules 15 and 16; (c) EVSE loads should be deemed *primary* when *integrated* with energy storage systems, *and* should not be double counted.

Powertree thus requests that its recommendations discussed in these comments be reflected in a final decision by the Commission that includes Powertree's Proposed Findings of Fact, and Conclusions of Law that are incorporated herein and attached to these Comments as Appendix A.

¹ P.U. Code Section 740.2 The commission, in consultation with the Energy Commission, State Air Resources Board, electrical corporations, and the motor vehicle industry, shall evaluate policies to develop infrastructure sufficient to overcome any barriers to the widespread deployment and use of plug-in hybrid and electric vehicles. By July 1, 2011, the commission shall adopt rules to address all of the following: (a) The impacts upon electrical infrastructure, including infrastructure upgrades necessary for widespread use of plug-in hybrid and electric vehicles and the role and development of public charging infrastructure.

² See, *Phase 2 Decision Establishing Policies To Overcome Barriers To Electric Vehicle Deployment And Complying With Public Utilities Code Section 740.2*, D.11-07-029, issued July 14, 2014; and *Decision Authorizing Short-Term Extension of Limited Provisions Regarding Electric Tariff Rules 15 and 16*, D.13-06-014, issued June 27, 2013.

II. THE FULL COST OF ELECTRIC WORK UP TO ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED IN ACCORDANCE WITH INDUSTRY STANDARD SPECIFICATION SHOULD BE CAPTURED BY ELECTRIC TARIFF RULES 15 AND 16 ALLOWANCES.

Powertree strongly advocates that the Commission address the rapidly transforming market for grid-tied energy storage systems integrated with PEV charging stations to mitigate potential negative electric system impacts of PEV usage by managing the relatively high current levels needed, while minimizing the extent of required electric utility distribution line extension-related upgrades. With very rapidly accelerating advances in PEV technology seen in recent announcements by a number of prominent PEV manufacturers of 200+ mile range vehicles featuring higher rates of charge (*e.g.*, Tesla Model 3, Chevrolet Bolt, Volkswagen E-Golf and BUDD) and the size and shape of the PEV market the need for adequate conductors, transformers and panels will be increasing and the associated cost to a tenant or property owner or third party installer will be significant. Further, the 7 kW cap on charging capability per PEV charging station is much too low, and should be raised to at least 18 kW per port to stay abreast of clear PEV market trends and to match the actual industry specification of SAE J1772 which allows up to 80 Amps for EVSE.³ Electric tariff Rules 15 and 16, and related utility tariffs currently in effect, should be modified accordingly to capture the full actual cost of PEV state-of-the-art PEV charging station charger installation cost to consumers.

Increasing the kW cap to at least full rate of the industry standard SAE J1772 specification per port covering the *entire cost* of PEV charging station installation to the point of

³ This point was made by PEV industry advocacy groups such as CESA when the Rule 15 and 16 allowances were last extended and the passage of time has made the need to raise the charging cap a critically needed step at this time. *See, Comments of The California Energy Storage Alliance on Proposed Decision Authorizing Short-Term Extension of Limited Provisions Regarding Electric Tariff Rules 15 And 16*, filed June 17, 2013, and *Reply Comments of The California Energy Storage Alliance on Proposed Decision Authorizing Short-Term Extension of Limited Provisions Regarding Electric Tariff Rules 15 and 16*. Filed June 24, 2013.

the EVSE (but not the EVSE itself), and integration of grid-tied energy storage systems should achieve the balance between expanding the PEV market by promoting PEV adoption and reasonable ratepayer cost containment, and preserving customer choice in PEV charging infrastructure that the Commission is appropriately seeking to strike with the Proposed Decision.

III. MULTI-TENANT AND MULTI-FAMILY RESIDENTIAL PROPERTIES SHOULD BE EXPLICITLY INCLUDED WITHIN THE SCOPE OF RESIDENTIAL PROPERTIES COVERED BY THE EXTENSION OF ELECTRIC TARIFF RULES 15 AND 16.

It has certainly been recognized the need for access by renters and residents of Multi-Tenant and Multi-Family residential properties is a key goal of State policy to rapidly accelerate deployment of PEV charging station infrastructure.⁴ Explicitly stating in its final decision that the intent of the Commission is that the extension contemplated by the Proposed Decision must be deemed to apply to the costs of installation of EVSE in residential properties serving those specific classes of ratepayers should dramatically expand access to this vital segment of California's residential population.

IV. ELECTRIC VEHICLE SUPPLY EQUIPMENT LOADS SHOULD BE DEEMED PRIMARY WHEN INTEGRATED WITH ENERGY STORAGE SYSTEMS, AND SHOULD NOT BE DOUBLE COUNTED.

It is well recognized that energy storage systems integrated with PEV charging stations can provide substantial cost of operations savings, improved equipment resiliency and an enhanced PEV driver experience through faster charging and increased utilization while also providing services to the electric grid.⁵ These operational benefits and savings make PEV driving much more affordable and thus a more compelling value proposition for consumers, and

⁴ See, e.g., Governor Brown's Executive Order B-16-2012
http://www.arb.ca.gov/msprog/zevprog/infrastructure/pev_infrastructure.htm

⁵ See, http://www.afdc.energy.gov/fuels/electricity_benefits.html, and see, *Comments of Powertree Services, Inc. on Assigned Commissioner And Assigned Administrative Law Judge's Scoping Memo and Ruling*, filed February 5, 2016, in R.15-03-011.

can be achieved using energy storage technology in innovative ways, such as demand charge mitigation, and increasing self-consumption of on-site generated electricity. Assuring the highest rate of charge to the PEV while reducing the demand impact on the electric distribution system serves multiple public goals by assuring more electric driving miles and at the same time reducing system impact of those miles.

Resiliency for PEV drivers is especially important because drivers can perceive a PEV as being potentially less reliable in an emergency when the grid may be temporarily unavailable. This fear can be successfully managed with energy storage systems used as a resilient power source, especially if combined with on-site Solar PV. Grid services can enhance the economic sustainability of EVSE installations by providing additional revenue streams to the EVSE site enabling them to be fully operational and reliable while the PEV driving population grows.

It is particularly important to recognize the importance of this analysis in the context of interconnection under electric tariff Rule 21. Achievement of all of these benefits requires that the load of the EVSE and the load of the charging cycle of the energy storage system must be considered *integrated* instead of *additive*. The term “additive” in this context means that the sum of maximum charge rate of the EVSE is *added* to the maximum charge rate of the energy storage system to arrive at a total load. The term “integrated” means that the sum of the discharge rates of the energy storage is *subtracted* from the sum of maximum charge rate of the EVSE to arrive at a total load with the condition that the grid connection requirement equals the size of the EVSE load without the energy storage system. As with other behind the meter energy storage applications such as load leveling the energy storage is constrained by its operational software to charge only when sufficient capacity is available. An additive-type analysis effectively disregards the operational priority given to the PEV charging station, thus assuring that the

EVSE will always be served in series with the energy storage system dictated by generally recognized technical principles. This integrated analysis correctly sizes electric tariff Rule 15 and 16 extensions and allowances at the maximum load of the EVSE being installed and the integrated energy storage system as a *part* of the EVSE load, rather than additive to the EVSE load, which would result in un-necessary costs for the ratepayer and customer.

This vital logical progression is enforced technically by properly sizing current breakers and other traditional forms of protective safety equipment as well as the operational software for the energy storage system. It is therefore critical that the final decision very clearly state that energy storage capacity provided to support EVSE must be considered integrated with the EVSE load and *not* as additive to the PEV charging load.

V. CONCLUSION.

Powertree thanks the Commission for the opportunity to submit these comments and urges acceptance of the recommendations discussed herein.

Respectfully submitted,



Donald C. Liddell

DOUGLASS & LIDDELL

Email: liddell@energyattorney.com

Counsel for
POWERTREE SERVICES, INC.

May 25, 2016

APPENDIX A

PROPOSED FINDINGS OF FACT AND CONCLUSION OF LAW

Powertree proposes the following additions be made in the Findings of Fact, and Conclusions of Law Ordering Paragraphs of the Proposed Decision set forth below.*

PROPOSED FINDINGS OF FACT:

5. [p. 5] The full cost of electric vehicle supply equipment installed in accordance with industry standard specification should be captured by rules 15 and 16 allowances.
6. [p. 5] Potentially excessive cost impacts on ratepayers, including multi-tenant and multi-family residences, are possible from including high level AC charging within the Common Treatment for Excess PEV Charging Costs and, as a result, a distinct policy for residential PEV installations at least 18 kW per port in capacity is needed, which include the more sophisticated charging systems.
7. [p. 5] EVSE loads should be deemed *primary* when integrated with energy storage systems and should not be double counted.

PROPOSED CONCLUSIONS OF LAW:

3. [p. 6] It is reasonable that the full *cost* of electric vehicle supply equipment installed in accordance with industry standard specification should be captured by rules 15 and 16 allowances.
4. [p. 6] Because of the possible excess cost impacts on ratepayers, it is reasonable to only apply the cost allocation policy to distribution upgrades for PEV charging installations for residential customers, including multi-tenant and multi-family residences, associated with charging installations [at least 18 kW per port in capacity].
5. [p. 6] It is reasonable that EVSE loads should be deemed *primary* when integrated with energy storage systems and should not be double counted.

* A page citation to the Proposed Decision is provided in brackets for each Finding and Conclusion of Law that is proposed.